



Youth, sports and alcohol consumption. Studying and comparing alcohol rituals in the Littoral Opal Coast

Porrovecchio Alessandro^{a*}, Caby Isabelle^b, Masson Philippe^c, Kuehn Carl^a, Hurdiel Rémy^a, Pezé Thierry^a, Theunynck Denis^a

^a Sports Sciences Department, University of the Littoral Opal Coast; URePSSS-EA 4110/EA448 ULCO Laboratory, Dunkerque, France

^b Faculty of Sports and Physical Education, Artois University, France ; UDSL, URePSSS-EA4488 Artois Laboratory, Liévin, France

^c Faculty of Sports and Physical Education, Lille II University, France ; URePSSS-EA 4110/EA448 ULCO Laboratory, Lille, France

Abstract

The aim of our paper is to introduce some results concerning a comprehensive and multidisciplinary analysis of the relationship between alcohol consumption, physical activity and health within a population of students of the Littoral Coast (France).

This work is part of a wider research called “Universanté”, started in 2008. This research includes an observatory to monitor students’ health and aims to promote healthy behaviors in the territory. Our analysis has been carried out on a sample of approximately 3.000 students, both at regional (Nord-Pas de Calais: Université du Littoral Côte d’Opale and Artois University, University of Lille 2), inter-regional (University of Rouen) and international level (University of Chicoutimi, Canada and University of Balamand, Lebanon).

This study is defining a “global health” profile, through the analysis of some usual determinants (biomedical, social, psychological, etc.). In this frame, we identified different styles of alcohol consumption in terms of frequency and quantities. Then, we crossed these data with those about the subjects’ physical activities and found whether there was a relation. At the time, our main hypothesis is that physical activity plays a protective role against alcohol consumption. Our secondary hypothesis is that it is possible to identify social indicators that may work as modulators of this phenomenon.

In our paper we will focus on the “risky” aspects of alcohol consumption. Namely, we are identifying some “risky groups” that can be associated with specific alcohol consumption styles, and we are analysing the ritual aspect of their behaviour from a sociological perspective.

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Keywords: Youth, Alcohol consumption, Health determinants, Sports;

1. Introduction

The aim of this paper is to introduce some results concerning a comprehensive and multidisciplinary analysis of the relationship between alcohol consumption, physical activity and global health condition within a population of students of the Littoral Coast (France). We will identify some “risky groups” that are related to specific alcohol drinking habits, and we will analyze these groups from a sociological perspective, focusing on the interaction between alcohol consumption habits and sports practices.

Alcohol habits are a critical issue in contemporary societies. Alcohol consumption is responsible for a large proportion of premature deaths and it is linked to more than 60 types of injury and chronic diseases, contributing to 3.2 % of deaths and 4 % of long-term disabilities (Kingsland et al., 2011; Rehm et al., 2009). Deaths related to alcohol consumption represent a significant proportion of avoidable deaths: harmful alcohol consumption constitutes

* E-mail address: alessandro.porrovecchio@gmail.com

the third leading cause of death and diseases in Europe (Haut Conseil de la Santé Publique, 2012). As concerns France, in 2009 a total of 36500 men's deaths are attributable to alcohol (13% of total mortality) versus 12500 in women (5 % of total mortality). According to the European Union, the number of deaths is between two and three times higher for men than for women (ratio of 2.9 % in France in 2008, Haut Conseil de la Santé Publique, 2012).

From 2002 to 2010, trends show a significant increase of episodic risky use among young women and also in certain social categories: alcohol is both a health and social risk factor. The level of mortality seems to be more related to the way alcohol is consumed, rather than the amount of alcohol consumed. For these reasons alcohol habits description are essential to analyse health behaviours, especially within young people (Richard et al., 2005; Baiocco et al., 2011).

Alcohol is the first psychoactive substance experimented during adolescence (Richard et al., 2005; Baiocco et al., 2011). Above the overall cultural meaning of alcohol consumption, adolescence is a phase of life where the first risky behaviours can occur (Le Breton, 2007; Porrovecchio, 2012). In general, many researches show that the proportion of drunkenness rises dramatically: from 17 % in 8th grade to 69 % in 12th grade. Beside, regular alcohol use (at least 10 times in the last month) increases from 3 % in 8th grade to 27 % in 12th grade (Richard et al. 2005). It is well established that alcohol use increases during young adulthood, with peak rates occurring during the late teens or early twenties (see also the WHO database Global Information System on Alcohol and Health – GISAH[†]).

In France, in 2011, the number of visits for acute alcohol intoxication at all ages represented 1 % of all visits in emergency departments. The 15 to 24 year olds (17 %) and 40 to 49 year olds (25 %) were the most involved. The prevalence of heavy alcohol use among young adults, associated with serious health related consequences, has become a great public health challenge in most European countries (Rehm et al., 2009), also because the percentage of heavy drinkers is becoming increasingly important among university students (Lawson et al., 2007; Kypri et al., 2008; Graaf et al., 2010; Baiocco et al., 2011).

The last survey of the French National Institute for Prevention and Health Education (INPES), conducted in 2010 and including 27653 respondents (of whom 2838 were between 18 and 25 years old) allows us to track some trends concerning alcohol drinking habits since 2005. People aged 18-25 years old distinguish themselves from older ones by less regular but more excessive alcohol consumption. The risk of occasional excessive drinking is higher among men (33,9 % vs. 14,7 % in women). It is particularly high among young people and decreases with age. This peculiarity was even more striking in 2010, because it was associated with an increase of risky single occasional drinking and drunkenness episodes. Compared to 2005, there are nearly twice more university students affected by drunkenness in 2010 and more than twice as many women: young men's and young women's behaviours tend to get closer (Beck et al., 2013). In spite of a greater awareness of this problem in public health policies in France and in Europe, these results stress the importance of prevention for public authorities, educators, workers and associations: they need to keep trying to reduce the frequency of drunkenness as well as their potential complications, and to reinforce researches, especially in public health interventions to reduce alcohol consumption in university students (Richard et al., 2005; Beck et al., 2013).

Easy access to alcoholic beverages, influence of media, of new lifestyles and cultural patterns, misinformation concerning alcohol consumption risks, seem to be some of the main factors that influence - in some contexts - the lowering of the age of consumers and the transformation of alcohol habits. This may lead to the diffusion of binge drinking. A study in ten European countries (including France) indicates that a low level of education characterizes men who are likely to drink abusively, while a higher one characterizes women who consume alcohol more likely (Bloomfield et al., 2006).

All the works that we introduced, stress the importance of public health policies aimed to reduce alcohol risky habits among young people.

[†] <http://apps.who.int/gho/data/?showonly=GISAH&theme=main>

2. Methodology

This paper is framed within the wider research “Universanté”, started in 2008, which include an observatory monitoring students’ health and promotes healthy behaviors. In a first phase our analysis was carried out in the area of the Littoral Opal Coast.

The research has been carried out on a wider sample of approximately 3000 students, both at regional (Nord-Pas de Calais: Université du Littoral Côte d’Opale and Artois University, University of Lille 2), inter-regional (University of Rouen) and international level (University of Chicoutimi, Canada and University of Balamand, Lebanon). The aim of Universanté is to define a “global health” profile through the analysis of some usual determinants (biomedical, social, psychological, etc.).

As concerns the aim of this paper, we will refer primarily to the data that have been collected within the Littoral Opal Coast area. This area counts more or less 850000 residents. It is located in the Nord-Pas de Calais region (France), overlooking to the English Channel, from the Belgium border to the Berck and Le Crotoy areas. In this area are located both the University of the Littoral Opal Coast, a multi-site university of around 10000 students, and 5 paramedical training sites (1800 students) that have been involved in Universanté. In this area, 3000 subjects aged 17-35 years participated in this study until now. Regarding the present paper, we will refer to a minor sample of 812 students, studying at the University of the Littoral Opal Coast and at paramedical training sites.

Data were collected transversally: the URePSSS laboratory organised some “Journées Universanté” (Universanté days) at the beginning of each academic year (October-November), from 2008 to the present day. Participation was optional, but the students were strongly encouraged to participate. The participants complete, in the same unit of time and place, a self-administered questionnaire and follow a circuit composed of physical and anthropometrical measurements. As far as the objectives of this paper, we identified some alcohol habits in terms of frequency and quantities. The main tools that we used as regards alcohol consumption are:

- The AUDIT: a synthetic indicator of risky alcohol consumption (Saunders et al., 1993);
- The CRAFFT-ADOSPA questionnaire, to screen harmful use of alcohol (Karila et al., 2007).

We crossed the data coming from the AUDIT and the CRAFFT-ADOSPA questionnaires with some features concerning the physical activities of these subjects, collected through the Exercise Dependence Scale-Revised (EDS-R) questionnaire (Kern, 2007). The data have been analysed using R©, after the correction or elimination of incomplete or incorrect records[‡]. The significance level adopted was 5 %, (p-value lower than 0.05). The questionnaires were anonymous and contained no information to identify students. Data collection was anonymous and confidential and was the result of a systematic consent of the student. The study design, was approved by the “National Commission on Informatics and Liberties”.

Our main hypothesis is that physical activity plays an important role (protective and/or inhibitor) as concerns alcohol habits. Our secondary hypothesis is that social determinants, culture and environment can act as modulators.

3. Findings

3.1 Alcohol habits among Littoral Opal Coast’s students

Overall, 812 students were involved in the survey, as concerns the Universanté 2013 (67.8 % girls, 32.2 % boys). Their average age was $21,6 \pm 5$ years. 63,1 % of them were enrolled in the nursing courses (IFSI), 13.2 % in the Sports Sciences ones (STAPS), the rest were coming from the physiotherapy and so on. Only 12 % of the students declared to have a student job. 42.6% were bursaries, 39.3 % practised sports in a club. All these features are introduced on table 1.

Table 1: Sample’s features. Source: *Universanté survey*

[‡] Data elaboration, correction and analysis has been done by Thierry Pezé and Isabelle Caby.

Age	n	%	Practice sports in a club	n	%
17-19	292	36,1	No	490	60.7
19-21	137	17	Yes	317	39.3
>21	379	46.9	Area	n	%
Sex	n	%	Nursing	511	63.1
Males	262	32.2	Sports Sciences (STAPS)	107	13.2
Females	550	67.8	Physiotherapy	72	8.9
Jobs	n	%	Ergotherapy	58	7.2
No	705	88	Economics and Management	17	2.1
Yes	96	12	Law	13	1.6
Bursaries	n	%	Sciences and Technology	11	1.4
No	457	57.4	Lifelong Learning	10	1.2
Yes	340	42.6	Human Sciences, Humanities and Languages	6	0.7
			Other	5	0.6

As concerns our sample, 9 % declared that they never consumed alcohol, 89 % declared that they consumed alcohol at least ones in their life, 2 % preferred not to answer to this question, or – basing on the ethical prescriptions concerning privacy – preferred to skip the area of the survey concerning addictions. Among those who declared having consumed alcohol beverages, if we eliminate non-significant values, they declared having started drinking between 13 and 23 year old (one of them declared having started drinking at 7, another one at 37). The mean age in which they started drinking is 16.63, and the median one is 16.

In the following parts of this paper, we will refer to the students who answered this part of the questionnaire.

Concerning the last 12 months, 6.2 % of the participants declared that they didn't consume alcohol (7.8 % were girls, 3.2 % boys) (see tab.2).

Table 2: Did you consume alcohol in the last 12 months? *Source: Universanté survey*

%	No	Yes
Females	7.8	92.2
Males	3.2	96.8
Total	6.2	93.8

Our aim, in this context, is to differentiate the consumption styles, in order to focus our analysis, in a following phase, on the part of the population whose alcohol habits could be defined as “risky”: the one characterized by some frequent punctual important alcohol abuse (in French, “Alcoolisations Ponctuelles Importantes”, API). The area of the Universanté survey concerning alcohol habits is based on a couple of questions taken from the AUDIT and ADOSPA questionnaires: an episode of punctual alcohol consumption is characterized by the consumption of 6 or more glasses of beer or other alcoholic products.

We will borrow also the categories of “heavy drinker” and “social drinker”, used by Baiocco et al. (2010, p. 26):

- The “social drinker” is a person who “consumes” alcohol from 1 to 4 times per month, but doesn't present significant episodes of punctual alcohol consumption in the last year (1 or less episodes in which he drank 6 or more glasses of beer or other alcoholic products);

- The “heavy drinker” is a person characterised by more than 1 episode of punctual alcohol consumption per week.

Starting from this approach and these interpretative categories, we tried to consider both the quantitative and the behavioural aspects of alcohol consumption: in the following phases of our research, we will try to analyze the phenomenon of alcohol consumption from a socio-anthropological perspective. At the same time, the interpretative categories of the ‘‘punctual important alcohol abuse’’ allows us to compare our results with those of the researchers who used the AUDIT and ADOSPA questionnaires all over the world.

This approach makes our perspective different from those proposed by other researchers, because it can be used also with non-clinical subjects. For example, it can be used in the context of a research on young people’s alcohol consumption and lifestyles, because it refers mainly to their behaviour in a specific timeframe. In addition, these definitions stress the possible changes on young people’s behaviours, avoiding some forms of easy labelling such as ‘‘addicted’’ or ‘‘alcoholic’’, which can lead to the acquisition of deviant (social and individual) identity.

Basing on the following tables (tab. 3, 4 and 5), we will identify the different categories of participants to the Universant  survey:

Table 3: What is the frequency of your alcohol consumption? *Source: Universant  survey*

%	1 per month	2-4 per month	2-3 per week	More than 4 per week
Female	37.1	53.2	8.8	0.9
Male	22.9	55.4	17.9	3.8
Total	32.2	54	11.9	1.8

Table 4: How many drinks do you drink in a typical day? *Source: Universant  survey*

%	1 or 2	3 or 4	5 or 6	7 or 8	10 or more
Female	42.2	30.3	18.7	6.7	2.2
Male	28.7	22.5	18.8	14.2	15.8
Total	37.6	27.7	18.7	9.2	6.8

Table 5: At which frequency do you drink more than 6 glasses of alcohol beverages? *Source: Universant  survey*

%	Never	Less than 1 per month	Once per month	Once per week	Almost everyday
Female	41.1	25.8	21.2	11.9	0
Male	15.6	22.4	38.8	23.2	0
Total	32.6	24.7	27.1	15.7	0

Table 3 introduces a first overview of the frequencies of alcohol consumption among the Universant  survey participants. Based on the definitions that we have proposed, 1.8 % of the participants (0.9 % females and 3.8 % males) drink alcohol regularly (more than 4 times per week). This number rises to 13.7 % if we consider those who declare drinking more than 2 times per week. This alcohol habit is more masculine than feminine. If we compare our data with the ones concerning the French population illustrated in the ‘‘Barom tre Sant ’’, we realize that the youth of our sample seems to drink less, they could be defined as people with weak chronically risky consumption (1.8 % versus 2.5 %, see Beck et al., 2013, p.90). But this comparison can’t be taken for granted because the Barom tre Sant ’s data refer to the 15-to-30 year olds and the authors stated that the frequency of consumption rises in parallel with the age (Beck et al., 2013).

Starting from our definitions, we can say that 34.7 % of the participants experienced some punctual alcohol consumption episodes (tab.4): 48.8 % of the male population and 27.6 % of the female one. In particular, 15.8 % of males declared that in a typical day, they drink 10 or more drinks.

Table 5 is the most important one as concerns the main topic of this paper. Through this table we can identify exactly the amount of people involved in regular and risky punctual alcohol consumption episodes among our population: those who declare to drink 6 glasses of alcoholic beverages one time per month or more are 42.8 % of the respondents: namely 62% of the male population and 33.1 % of the female one. This population – oversimplifying – could be defined “risky”, and will be at the core of our following analysis.

No one declares to drink 6 or more alcohol beverages almost everyday, so –based on our definitions – no one can be framed within the “heavy drinker’s” population. Though the data concerning heavy drinking are not alarming from a quantitative point of view, if we compare our data with the ones proposed by the “Baromètre Santé”, looking at it one more time as a sort of generic indicator, we can see that from a national point of view 10.8 % of the 15-to-30 year olds manifest risky or addictive alcohol habits: those are men drinking more than 21 alcoholic beverages per week, women drinking more than 14 alcoholic beverages per week OR people drinking more than 6 glasses of alcohol beverages more than once a week. As concerns our sample, the data are much more alarming: the ones that drink more than 6 glasses of alcohol beverages more than once a week are the 15.7 % of the sample (23.2 % of males, 11.9 % of females).

Before we start focusing on the population characterized by the most risky habits, we should clarify some aspects that could seem confusing. Looking at table 5 and 6 it is important to explain that having experienced some punctual alcohol consumption episodes (drinking 5/6 or more glasses of some alcoholic beverage) doesn’t necessarily mean being in a condition of constant risk. This only means that among one’s panel of consumption, this kind of experience happened. For this reason, the fact that the two tables refer to two different aspects of the phenomenon (5/6 or more glasses tab. 4; 6 or more tab. 5) doesn’t affect our discussion.

4. Discussion: the frequent punctual alcohol consumption cases

We will now focus on a comparison between some features characterizing the “risky” population, and we will compare it to the overall one, to try to identify some determinants.

In a first phase we will trace some socio-demographic characteristics of the sample, in a second one we will try to verify our main hypothesis, namely that physical activity plays a protective and inhibitor role in alcohol consumption.

As concerns their socio-demographical characteristics, the students who participated to the Universanté survey, come mainly from the middle and working class (tab.6).

Table 6: Fathers and Mothers jobs *Source: Universanté survey*

		Farmers	Artisans, merchants and company managers	Middle Managers, intellectuals	Intermediary professions	Employees	Working class	Unemployed
Fathers	Non risky	3.4	11.0	21.5	11.3	23.9	25.2	3.7
	Risky	2.8	12.1	23.2	9.0	24.6	24.2	4.2
	Together	3.1	11.5	22.2	10.3	24.2	24.8	3.9
Mothers	Non risky	1.8	5.1	12.4	13.1	39.1	6.3	22.2
	Risky	0.0	8.1	17.2	14.8	38.0	6.7	15.2
	Together	1.0	6.3	14.4	13.9	38.7	6.5	19.2

As far as the risky ones, there are no significant differences compared to the non-risky ones. We can only highlight the fact that fewer mothers of the risky are unemployed (15.2 % vs. 22.2 %), and more fathers of risky are unemployed (4.2 % vs 3.7 %). There are more parents (both mothers and fathers) coming from the middle managers or intellectual area as concerns risky. Concerning parents’ jobs, the Pearson's Chi-squared test showed a link (even if very weak) with alcohol consumption (X-squared = 15.7781, df = 18, p-value = 0.608). This link seems to be

stronger as regards mothers' condition and alcohol consumption ($X^2 = 24.3827$, $df = 18$, $p\text{-value} = 0.1429$). Simplifying, we can say that the risky condition is a bit wealthier than the non-risky one, or at least they have more money available.

This feeling is confirmed by the data concerning the scholarships for needy students and the ones related to the students jobs. Concerning the scholarships, only 37 % of the risky received one in the last year, versus 45.5 % of the non risky ones. Concerning students' jobs, the 14 % of risky ones are actually working, versus the 10.4 % of the non-risky. This elements don't highlight an important needy condition, but shows that – with respect to the global condition – risky students are wealthier and have the opportunity to use more money that the non-risky ones.

As concerns the physical activities, at a first glance, some interesting data show that the "binge drinking population" declared to be engaged on both, high-intensity physical activities (2.41 days per week versus 1.58) and medium-intensity physical activities (3.14 days per week versus 2.58) during their job hours. The pattern is the same concerning their leisure's physical activities: they train in both high-intensity physical activities (2.41 days per week versus 2.1) and medium-intensity physical activities (2.03 days per week versus 1.91). Furthermore, the *risky* that are licensed in sports clubs are proportionally more numerous than the non-risky ones (49.3 % vs. 34.2 %). In the end, the global score concerning the physical activities of the *risky* is higher than the one of the non-risky (13.68 vs. 15.02).

Table 7: Are you licensed in a sports club? Source: *Universant  data*

	No	Yes
Non risky	65,8 %	34,2 %
Risky	50,7 %	49,3 %
Total	59,4 %	40,6 %

If we take a look at the data concerning the Exercise Dependence Scale-Revised (EDS-R) questionnaire (Kern 2007), we can see that the risky sample's overall profile is closer to a condition of addiction to sports. All the 20 items of the EDS-R questionnaire show that the risky sample's values are significantly higher than those of the non-risky one ($p\text{-value} = 0.03704$).

These data can't say anything about the causes and the implications, namely they don't show the direction of the correlation. But they highlight an overall condition of uneasiness that is going towards a precise direction: the risky profile tends to be associated to the profile of those who perform physical activities in a problematic way (we prefer here not to define those people as "sport addict").

Conclusion

Our data can't suggest a possible solution concerning the critical issues and the uneasiness highlighted. They clearly show that the risky's overall profile is closer to a condition of addiction to sports, but we don't exactly know why. We can formulate some hypothesis that must be verified in further studies, adding to our research strategy some qualitative spin-offs. At the moment, we can formulate two main hypothesis about the sociological causes that led to this condition. The first one is related to the social environment, the second one to a new conception of risk, emerging in the youth imaginary.

As concerns the social environment, when we discuss about young people's habits and behaviours we must take into account the fact that the changes that occurred in western societies in the last decades, have been significant and led to a sort of deregulation of values: the transformations involving the family and the other socialization agencies (Porrovecchio, 2012 and 2013) has rapidly affected youth (sub)cultures and their socio-cultural forms. In this context, the social interaction codes and the needs of social integration and recognition, take on new shapes and leave room to individuals' initiative (see for example Le Breton, 2007). In particular, there's a set of rituals which have a special and decisive role in the path for adulthood (Van Gennep, 1909) that has lost its power: like other social forms, those rituals have undergone some changes that transformed them significantly: Western societies no longer recognize collectively established rites of passage (Goguel of Allondans, 2005) as necessary steps for adulthood. Contemporary societies, in fact, leave to the individual the honour and responsibility to build and shape

the path of their existence through the creation of intimate rites of passage (Le Breton, 2007). Those are relatively new kinds of rituals performed in a relatively solitary way, tending to conflict with the established social ethics (“risky” behaviours).

This “need for rituals”, according to Le Breton (2007) can be one of the most important factors that determine a wide range of phenomena connected to risky behaviours, from particularly unsafe lifestyles – as for example those who lead to a condition of sport addiction – to unhealthy habits – as for example risky alcohol consumption. In our hypothesis, these attitudes and behaviours could be connected to a substantial reevaluation of the acceptable risks: a new conception of risk is emerging, and it’s characterized by the repositioning of adolescents’ guidelines from safe goals to more flexible ones: individuals must be able to risks, because risk is an indispensable condition to get ahead in life and to be somebody (Le Breton, 2007 and 2013). This aspect is evident if we take a look at table 8, that highlights an important condition of risk, especially as concerns the frequent punctual alcohol consumers.

Table 8: Have you ever been in a vehicle (car, motorcycle, scooter ...) driven by someone (including yourself) who had been drinking? Source: *Universanté data*

At which frequency do you drink more than 6 glasses of alcohol beverages? →				
Have you ever been in a vehicle (car, motorcycle, scooter ...) driven by someone (including yourself) who had been drinking?	Never	Less than 1 per month	Once per month	Once per week
Never	37.1	26.5	24.4	12.0
Sometimes (less than 1 time per month)	17.8	22.1	34.4	25.8
Usually (more than 1 time per month)	25.0	6.2	37.5	31.2
Together	32.4	25.0	27.0	15.6

The «need for ritual» is undoubtedly the main interpretative key to understand a wide range of social phenomena and cultural forms such as the problematic use of alcohol or psychoactive substances and sports addiction – a series of elements and aspects that have been highlighted during the first analysis of the Universanté data. Our main hypothesis, taking a distance from the specific case of the risky punctual alcohol consumption episodes, is that these behaviours and attitudes can be an important indicator of the new way to look at risks, described above. Risk itself becomes a cultural factor, linked to the perception of the reversibility of choices: abuse of alcohol, consumption of soft drugs and high speed driving are not associated solely or necessarily to conditions of disadvantage or deprivation, but to some generalized features characterizing the evolutionary processes of youth culture. Some scholars, in particular David Le Breton, defined the actual widespread diffusion of risky behaviours as “passion of risks” (1991).

Therefore, we can say that if prevention of risky alcohol habits has become a public health issue, the assessment made through Universanté, gave us an idea of our students’ health and tried to make students responsible for their health.

Starting from this perspective, we can also develop some intervention strategies, for example through physical activity. Although our fist analysis shows a significant interaction between risky alcohol consumption and sport addiction, it’s undeniable that this interaction can be managed through some intervention strategies: physical activity may be a moderator or an accelerator regarding alcoholic consumption.

Given the ritual and social integrative role generally attributed to sport, it would be interesting to focus our future researches on an appropriate strategy of social and cultural intervention to prevent risky behaviours.

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